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Agricultural Memorandum No. 259

Twin lamb percentages (Revision of Ag. Memo. 214)

The inherent defect in Ag. Memo. 214 was the assumption that Denbighshire rainfall could correctly be assessed by reference only to Hawarden.

The analysis has now been repeated using the mean of rainfall records from three stations, namely, Hawarden, Wrexham and Ruthin.

With notation,

A = May plus June effective transpiration (1 inch tolerated deficit)
B = July plus August effective transpiration

then $u = \frac{100A}{B(A+B)}$ [Note Ag. Memo. 214 incorrectly stated this with the factor 10]

and R = July plus August rainfall

B' = July plus August potential transpiration

then v = R-B', with all negative values taken as zero.

The twinning percentage became 13.8 - 0.27u - 0.24v established on data for the years 1954/55 to 1964/65, and checked for years 1965/66 and 1967/68.

Results Year	Twinning Percentage	$\frac{100A}{B(A+B)}$	R-B'	Twinning Percentage Estimate	Error
1955/56	6.6	27.1	0	6.5	-0.1
1963/64	9.0	14.6	0	9.9	+0.9
1964/65	9.1	12.1	0	10.5	+1.4
1954/55	9.7	9.7	2.05	10.7	+1.0
1959/60	10.0	14.3	0	9.9	-0.1
1956/57	10.4	6.6	5.05	10.8	+0.4
1957/58	11.1	6.8	4.15	11.0	-0.1
1961/62	11.4	6.4	0	12.1	+0.7
1958/59	12.2	8.7	1.75	11.0	-1.2
1962/63	12.4	11.6	0	10.7	-1.7
1960/61	12.8	6.6	0.60	11.9	-0.9
1965/66	10.2	8.8	0.75	11.2	+1.0
1967/68	* 9.3	11.4	0	10.7	+1.4

* incomplete figures.

Any comments or criticism on this memorandum should be sent to the Author.

L.P. Smith
Meteorological Office
Bracknell
Berkshire RG12 2SZ

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